

REMARKS

Reconsideration and allowance of the above-identified application are respectfully requested. Claims 1, 3 and 5-10 remain pending, wherein claims 1, 5, 6, 9 and 10 are amended.

Claims 5, 7 and 8 are objected to for minor informalities. Claim 5 is amended in the manner discussed in the Office Action. Claim 6 is amended to recite that “the multilayer module board comprises four connector terminals”, which provides antecedent basis for the recitation of the four connector terminals in claims 7 and 8. Accordingly, withdrawal of the objections to claims 5, 7 and 8 is respectfully requested. Claims 9 and 10 respectively recite similar elements to dependent claims 7 and 8, and are amended in a similar manner to that of claim 6.

Claims 1 and 5 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,303,989 to Yasuho et al. (“Yasuho ‘989”). This ground of rejection is respectfully traversed.

Claim 1 is amended to recite that the base board is configured to accept interchangeably a connection with a multilayer board that is (i) the low-end module board, (ii) the high-speed module board and (iii) the advanced function module board. As discussed in the present application, this arrangement is particularly advantageous because it eliminates the need to design and manufacture the circuit board from scratch depending upon the particular specifications required. Instead, a single base board can be used with a number of different multilayer boards, the particular multilayer board being selected

depending upon the particular application in which the circuit board device is being used.

The Office Action cites Yasuho '989 as disclosing a base board 1 connected to a multilayer module board 7 that is a high-speed module board. Yasuho '989, however, does not disclose that base board 1 interchangeably accepts the following three types of multilayer boards:

- (i) the low-end module board;
- (ii) the high-speed module board; and
- (iii) the advanced function module board.

Instead, base board 1 of Yasuho '989 appears to be configured to accept a connection to a single type of board, namely module board 7, which the Office Action states is a high-speed module board. Accordingly, Yasuho '989 does not anticipate claim 1.

Claim 5 depends from claim 1 and is patentably distinguishable at least by virtue of its dependency. Accordingly, the rejection of claims 1 and 5 for anticipation by Yasuho '989 should be withdrawn.

Claim 3 is rejected under 35 U.S.C. § 103(a) as being obvious in view of the combination of Yasuho '989 and U.S. Patent No. 6,085,137 to Aruga et al. ("Aruga"). This ground of rejection is respectfully traversed.

Claim 3 depends from claim 1. As discussed above, Yasuho '989 does not disclose all of the elements of amended claim 1. It is respectfully submitted that Aruga does not remedy the above-identified deficiencies of Yasuho '989 with respect to amended claim 1, and accordingly the combination of Yasuho '989 and

Aruga does not render claim 1 obvious. Claim 3 is patentably distinguishable at least by virtue of its dependency, and thus the rejection of claim 3 for obviousness should be withdrawn.

Claims 6-10 are rejected under 35 U.S.C. § 103(a) as being obvious in view of the combination of Yasuho '989 and U.S. Patent No. 5,346,402 to Yasuho et al. ("Yasuho '402"). This ground of rejection is respectfully traversed.

Claims 6-8 variously depend from claim 1. As discussed above, Yasuho '989 does not disclose all of the elements of amended claim 1. It is respectfully submitted that Yasuho '402 does not remedy the above-identified deficiencies of Yasuho '989 with respect to amended claim 1, and accordingly the combination of Yasuho '989 and Yasuho '402 does not render claim 1 obvious. Thus, claims 6-8 are patentably distinguishable at least by virtue of their dependency.

Moreover, the combination of Yasuho '989 and Yasuho '402 does not render claims 7 and 9 obvious because the combination does not disclose or suggest a transfer adaptor attached to the base portion of the four connector terminals and that the four connector terminals are connected through soldering onto a rear surface of the board while attached to the transfer adapter.

The Office Action recognizes that Yasuho '989 does not disclose these elements of claims 7 and 9, and instead relies upon element 12 of FIGs. 1 and 2 and element 34 of FIG. 22 of Yasuho '402.

Regarding element 12, Yasuho '402 discloses that this is a roof that provides electromagnetic shielding between circuit modules.¹ As illustrated in

¹ Column 4, line 65-column 5, line 1.

FIGs. 1 and 2 of Yasuho '402 (reproduced below), roof 12 is attached to projections 14.

FIG. 1

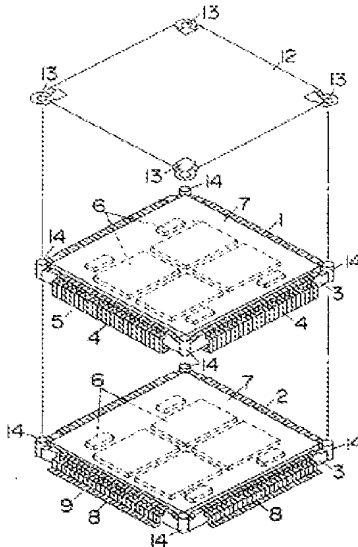
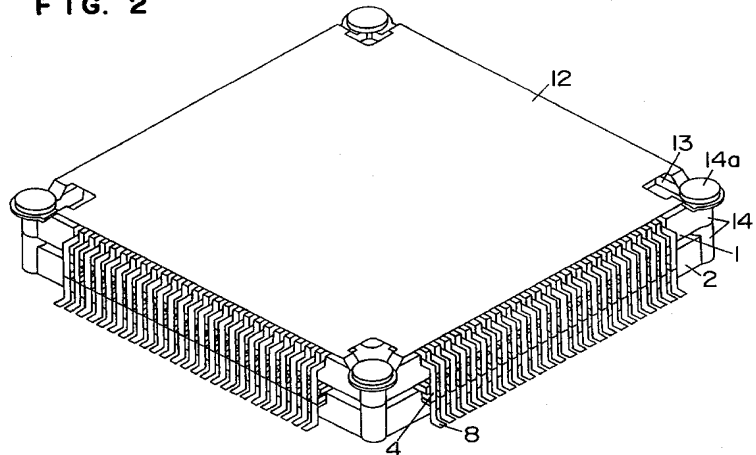


FIG. 2



Yasuho '402 does not disclose or suggest that roof 12 is attached to a base portion of four connector terminals. Nor does Yasuho '402 disclose or suggest that roof 12 is attached to four connector terminals while the four connector terminals are connected through soldering onto a rear surface of the board.

Regarding element 34, Yasuho '402 discloses that these are heat-radiating plates that are arranged at the tops of circuit modules.² Yasuho '402 does not disclose or suggest that heat-radiating plates 34 are attached to the base portion of the four connector terminals and that the four connector terminals are connected through soldering onto a rear surface of the board while attached to the heat radiating plates.

The transfer adaptor recited in Applicant's claims 7 and 9 improves ease of operation in positioning the connector terminals while they are bonded onto the

board. There is nothing in Yasuho '402 disclosing or suggesting that roof 12 provides any such functionality.

Accordingly, even if one skilled in the art were motivated to combine Yasuho '989 and Yasuho '402, the combination would not disclose or suggest all of the elements of claims 7 and 9.

Additionally, the combination of Yasuho '989 and Yasuho '402 does not render claims 8 and 10 obvious because the combination does not disclose or suggest a multilayer module board that includes both:

1. four connector terminals, each with aligning pins projecting at both ends of the base portion to be used when soldering the connector terminal onto a rear surface of the board; and
2. a pair of positioning holes at which the aligning pins are loosely fitted formed at each of four corners of the board.

The Office Action relies upon projections 14 of circuit modules 1 and 2 of Yasuho '402 as corresponding to the claimed aligning pins and fixing bores 13 of roof 12 Yasuho '402 as corresponding to the claimed positioning holes. This correspondence does not satisfy the conclusion of obviousness for the following reasons.

First, the claimed aligning pins and positioning holes are part of the multilayer module board, whereas Yasuho '402 discloses that roof 12 is a separate component from circuit modules 1 and 2.

Second, claims 8 and 10 recite that each of the four corners includes "a pair of positioning holes", whereas Yasuho '402 discloses a single fixing bore 13 in each corner of roof 12.

² Column 8, lines 18-23.

Third, the claimed aligning pins and positioning holes control positions of the connector terminals when soldering the connector terminals. There is nothing in Yasuho '989 or Yasuho '402 disclosing or suggesting that projections 14 and fixing bores 13 control the position of connector terminals while soldering the connector terminals.

Finally, while roof 12 of Yasuho '402 is used for dissipating heat, the claimed four connector terminals and positioning holes are used for positioning the connector terminals with a high degree of reliability during soldering.

Accordingly, even if one skilled in the art were motivated to combine Yasuho '989 and Yasuho '402, the combination would not disclose or suggest all of the elements of claims 8 and 10.

It is respectfully requested that the rejection of claims 6-10 for obviousness be withdrawn for at least those reason stated above.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned. If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323, Docket No. 029267.55488US.

Respectfully submitted,

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